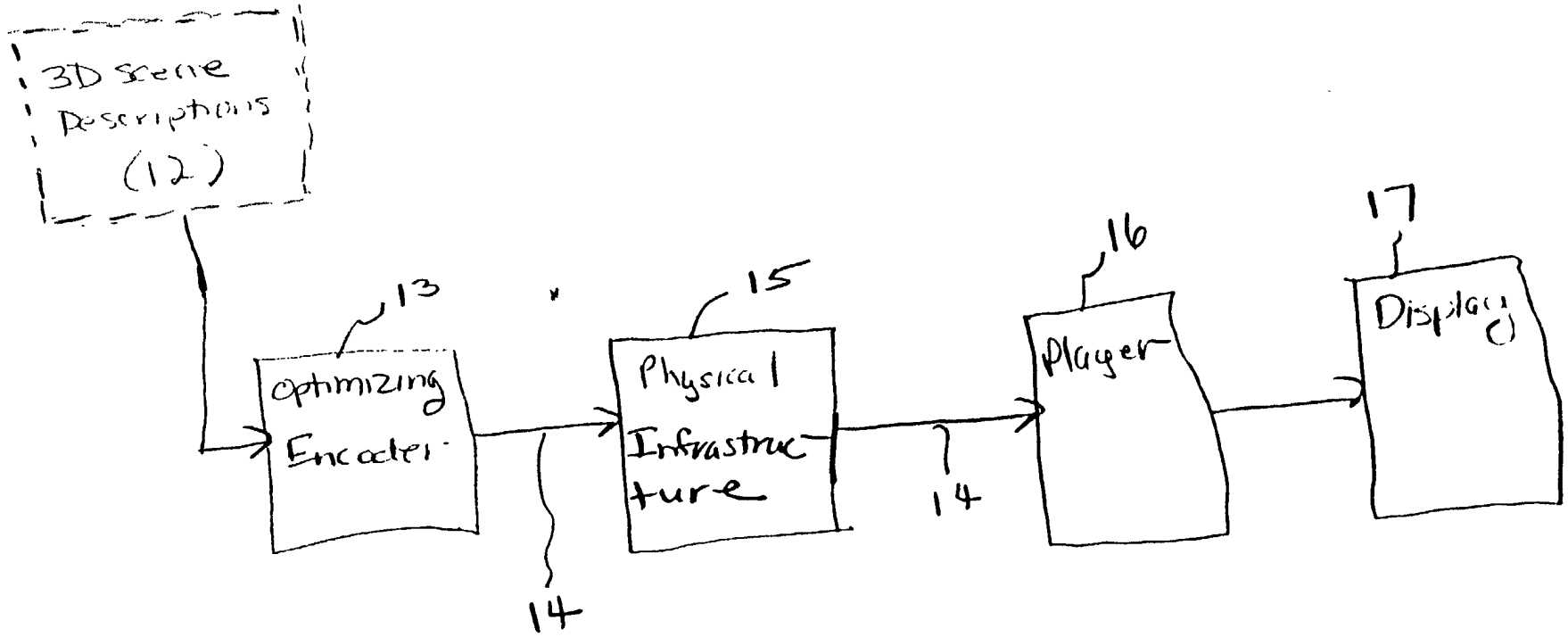

3D Scene Descriptions (12)
13
Optimizing Encoder
15
Physical Infrastructure
16
Player
17
Display
14
14
Streaming Three-Dimensional Protocol

FIG. 1

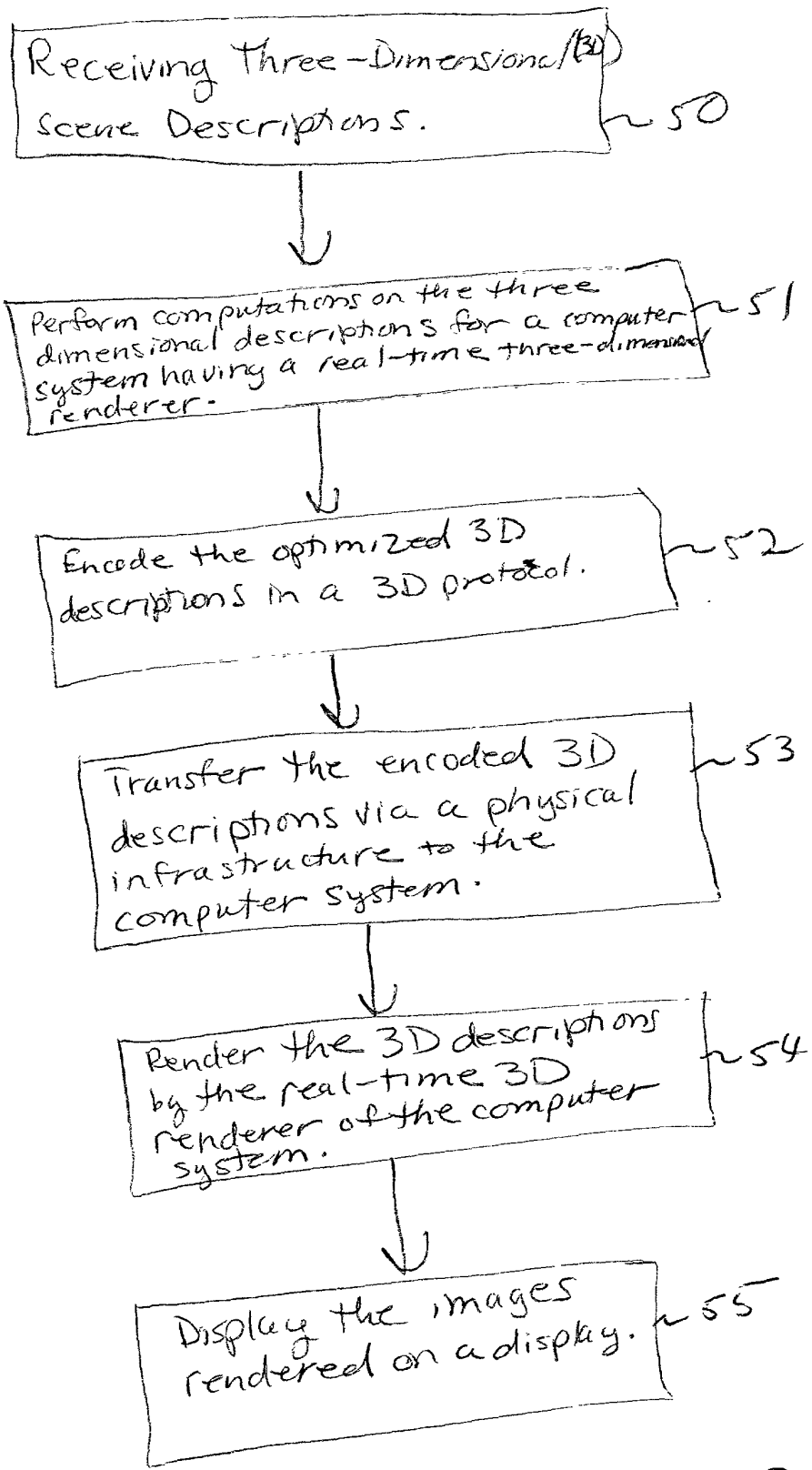


FIG. 2

Petitioner Ex. 1004 p. 14

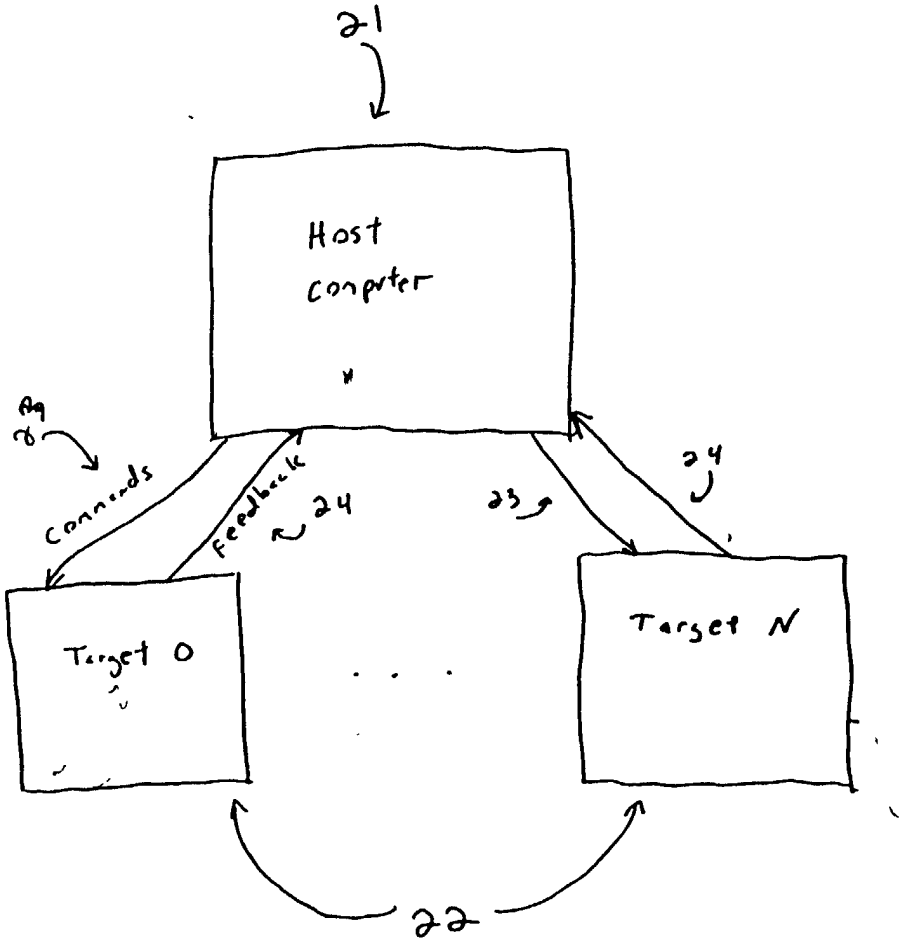

21
Host computer
Commands
Feedback
24
23
24
Target 0
Target N
22

FIG. 3

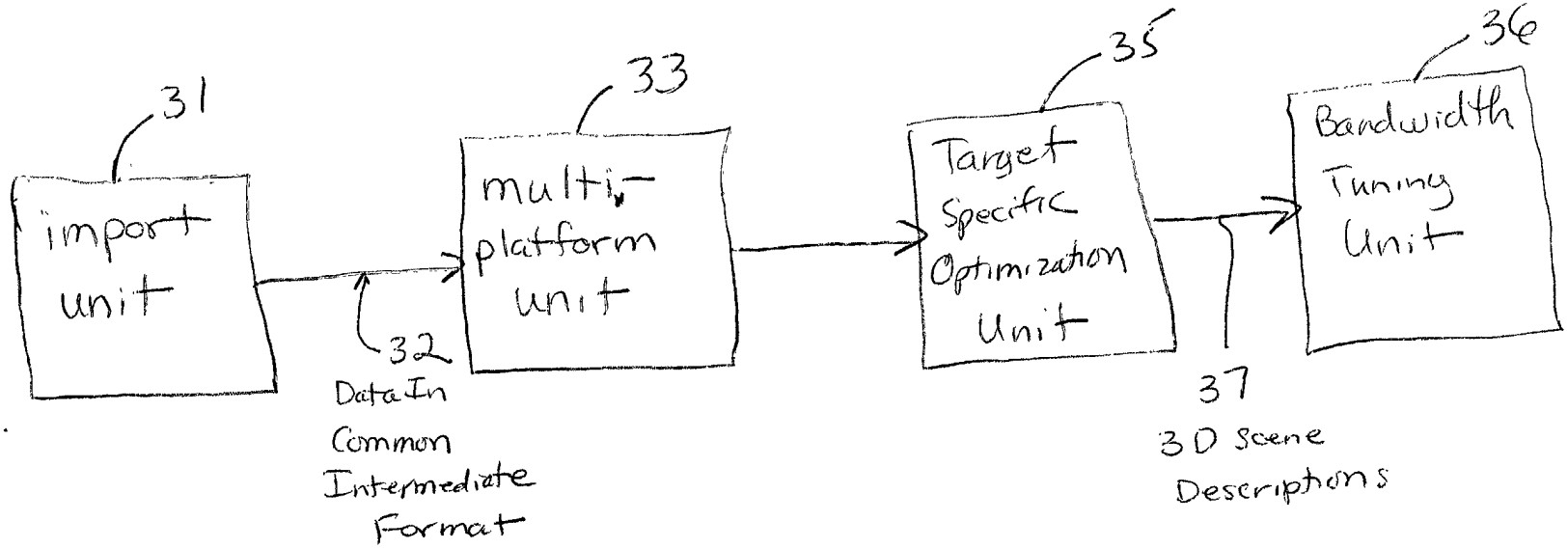

31
import unit
32
Data In Common Intermediate Format
33
multi-platform unit
35
Target Specific Optimization Unit
37
3D Scene Descriptions
36
Bandwidth Tuning Unit

FIG. 4

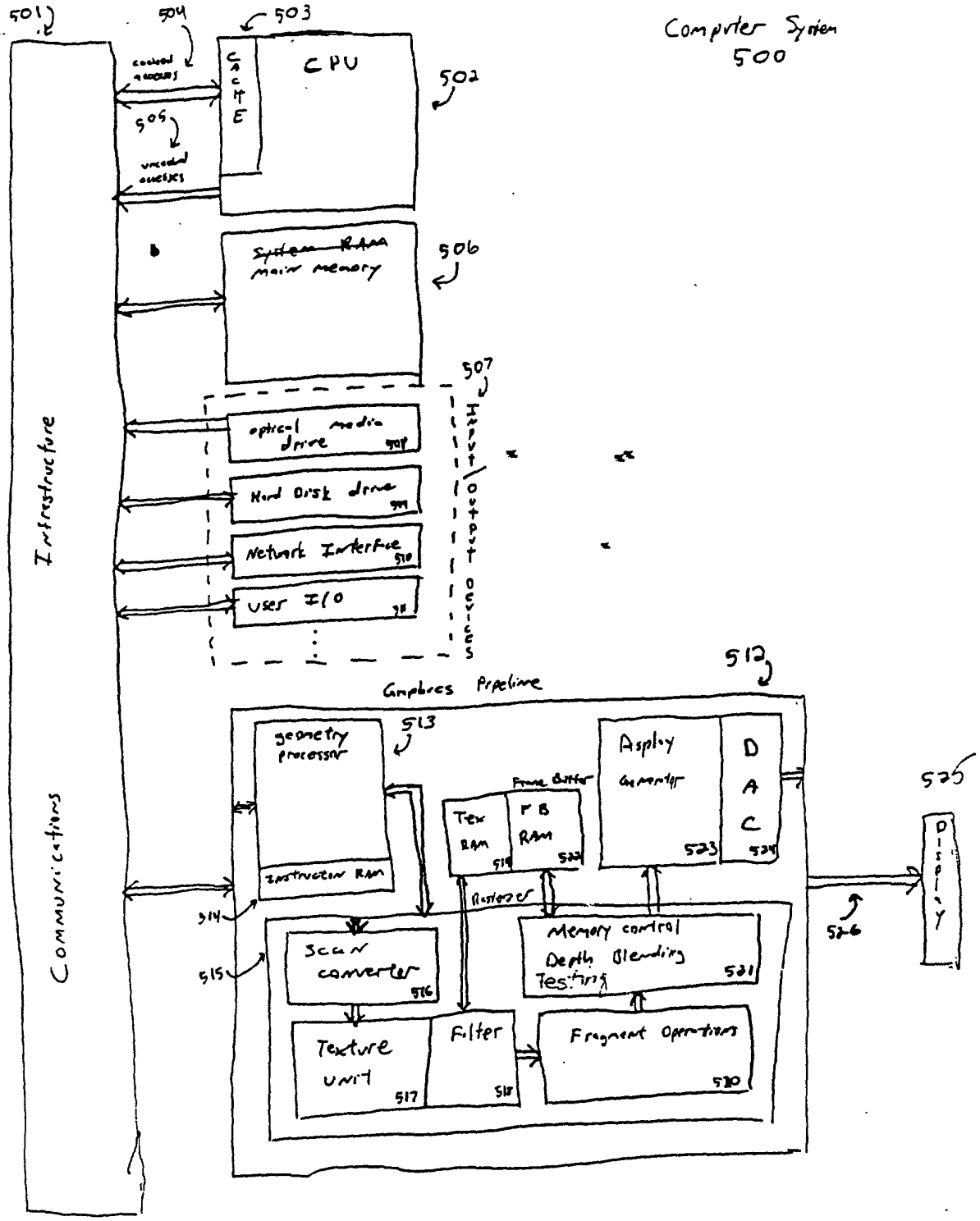

Computer System
500
501
504
503
CPU
502
cache
cached accesses
505
uncached accesses
System RAM
main memory
506
507
Input/Output Devices
optical media drive
Hard Disk drive
Network Interface
510
User I/O
Infrastructure
Communications
512
Graphics Pipeline
geometry processor
513
Instruction RAM
514
515
Scan converter
516
Texture unit
517
Filter
518
Frame Buffer
Tex RAM
519
FB RAM
520
Raster Op
Display
Memory control
Depth Blending
Testing
521
Fragment Operations
520
523
DAC
524
525
526
Display

Figure 5

Patent Application

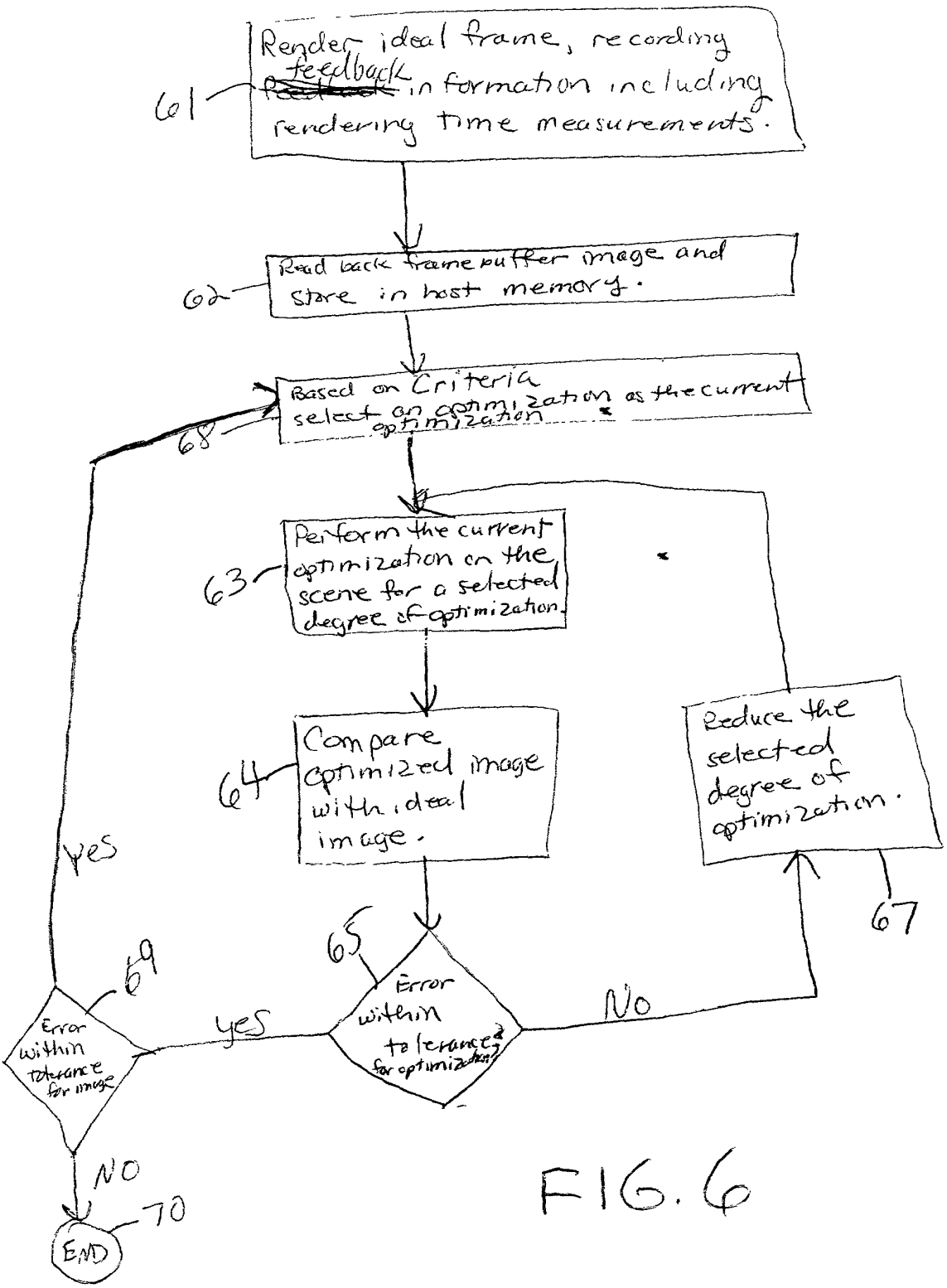
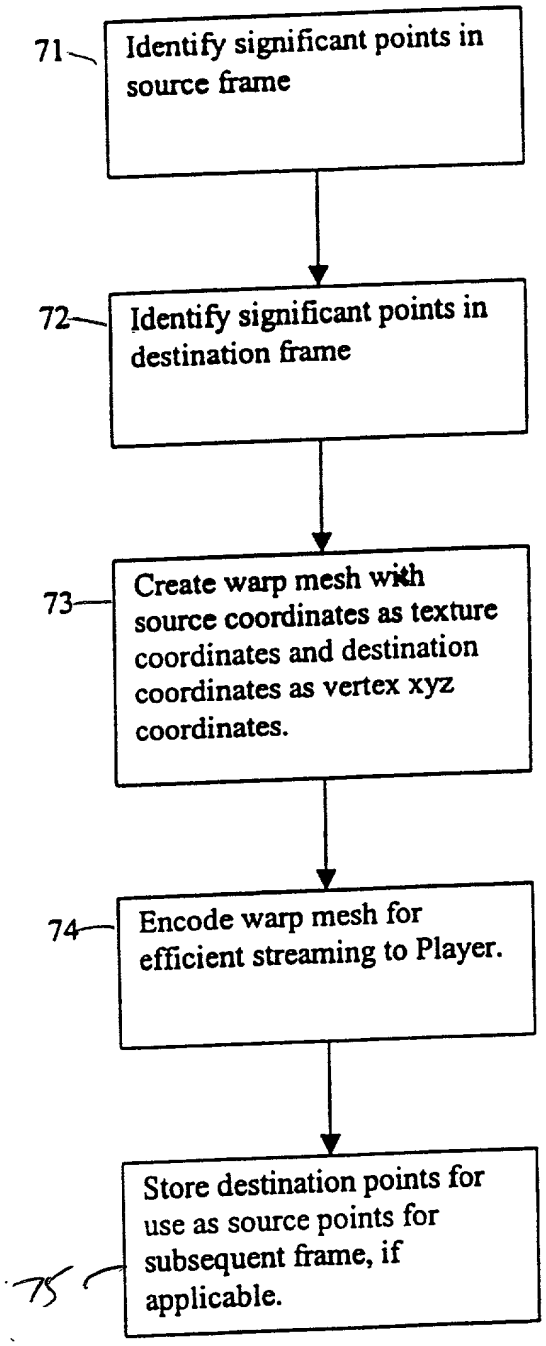


FIG. 6

Figure 7.


71
Identify significant points in source frame
72
Identify significant points in destination frame
73
Create warp mesh with source coordinates as texture coordinates and destination coordinates as vertex xyz coordinates.
74
Encode warp mesh for efficient streaming to Player.
75
Store destination points for use as source points for subsequent frame, if applicable.

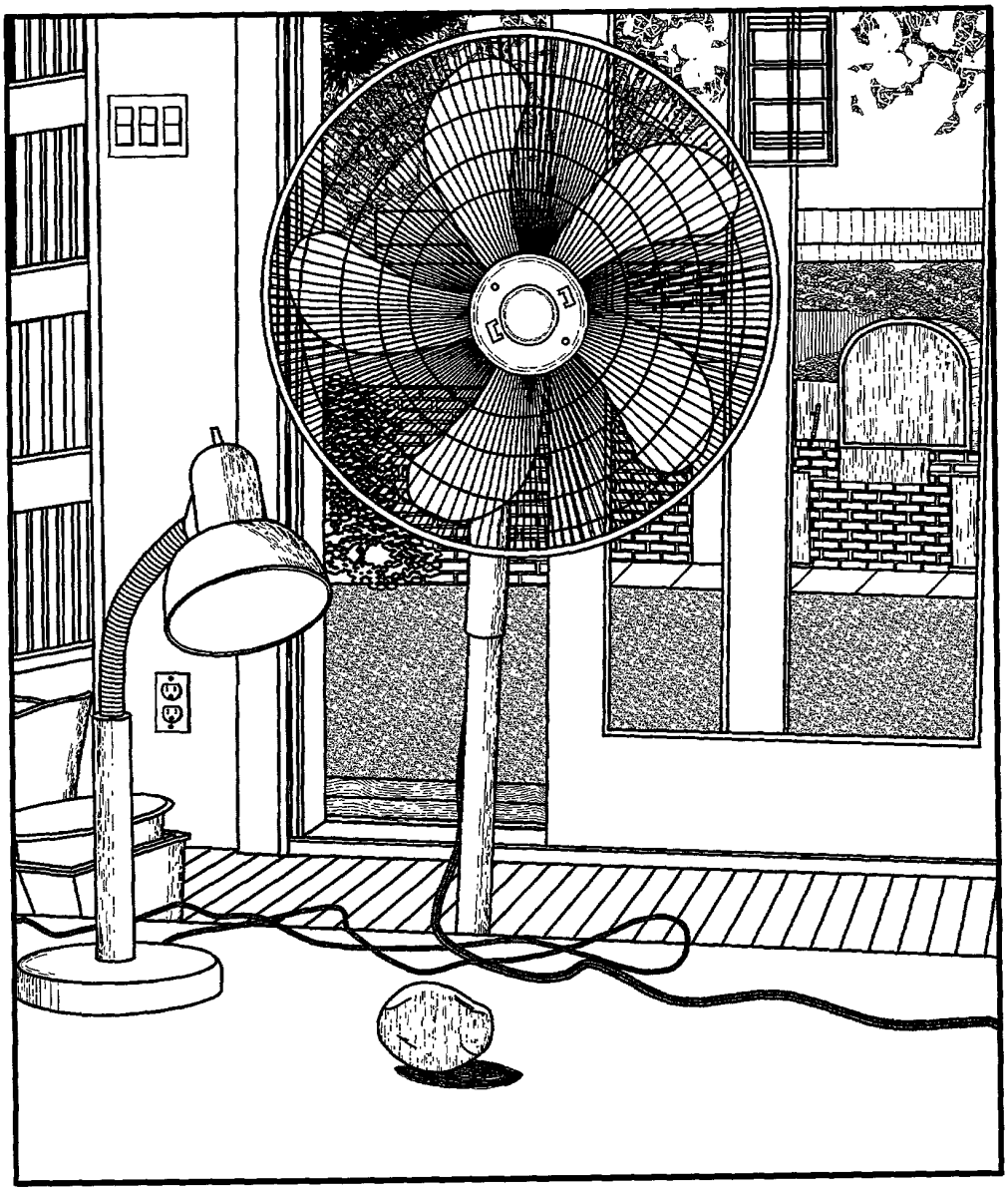


FIG. 8

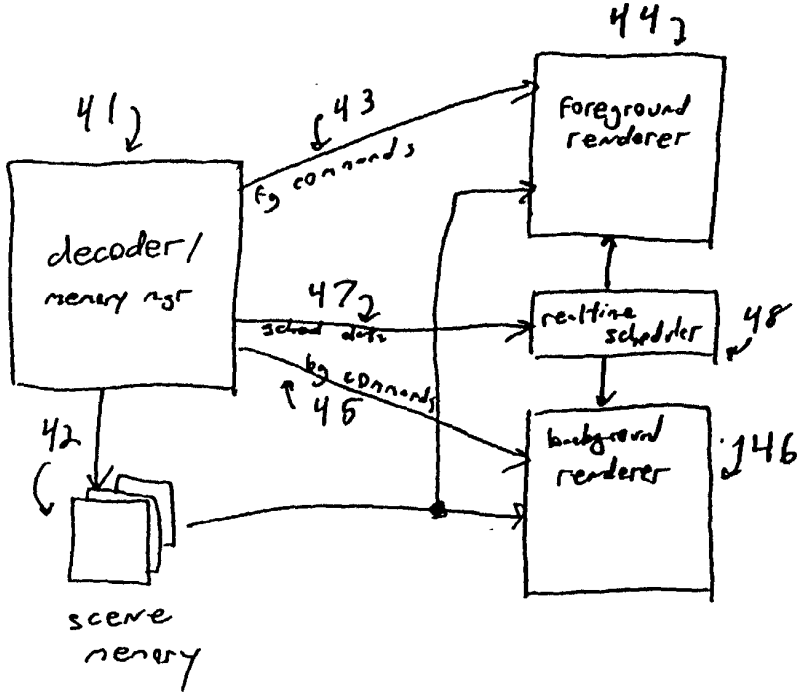

44
41
43
fg commands
foreground renderer
decoder/ memory mgr
47
real-time scheduler
48
bg commands
46
42
background renderer
146
scene memory

FIG. 9